

REMARKS

Claims 1-3, as amended, remain herein. Claim 4 remains herein but is presently withdrawn from consideration.

Claim 1 has been amended to recite heat-treating the film and the semiconductor layer, thereby diffusing Si as a dopant in the semiconductor layer. See applicants' specification, at page 7, last paragraph.

This Amendment places all claims 1-3 in condition for allowance, and surely in better condition for any appeal. Thus, entry of this Amendment and allowance of all claims 1-3 are respectfully requested.

1. Claims 1-3 were rejected under 35 U.S.C. §102(e) over Herner et al. U.S. Patent Application Publication 2003/0030147.

The presently claimed contact formation method includes forming a film comprising Si and Ti on a surface of a layer of a Group III nitride semiconductor, and heat-treating the film and the semiconductor layer, thereby diffusing Si as a dopant in the semiconductor layer. This method is nowhere disclosed or suggested in the cited reference.

The Office Action cites Herner et al. '147 as allegedly disclosing a Ti film on a Si film, which are annealed at 800 deg. C on the surface of a semiconductor material including a Group III nitride semiconductor. Actually, Herner '147, Fig. 2, discloses three separate steps, namely forming a first semiconductor region containing Si, then forming on that first region a second semiconductor region containing Si, and then forming a Ti film on that second region. Herner et al. '147 discloses forming a TiSi layer by heat treatment, but the Si in the TiSi layer does not serve as an impurity in the Si semiconductor and Herner et al. '147 is silent about diffusing Si as a dopant in the semiconductor layer, as recited in applicants' claim 1.

For the foregoing reasons, Herner et al. '147 fails to disclose all elements of applicants' claimed invention, and therefore is not a proper basis for rejection under §102. And, there is no disclosure or teaching in Herner et al. '147 that would have suggested the desirability of modifying any portions thereof effectively to anticipate or suggest applicants' presently claimed invention. Claims 2 and 3, which depend from

Serial No. 10/625,546

claim 1, are allowable for the same reasons explained herein for claim 1. Accordingly, reconsideration and withdrawal of this rejection are respectfully requested.

Serial No. 10/625,546

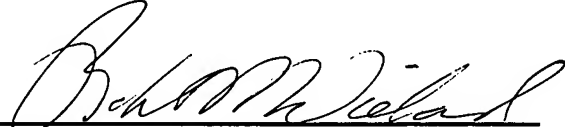
All claims 1-3 are now proper in form and patentably distinguished over all grounds of rejection stated in the Office Action. Accordingly, allowance of all claims 1-3 is respectfully requested.

Should the Examiner deem that any further action by the applicants would be desirable to place this application in even better condition for issue, the Examiner is requested to telephone applicants' undersigned representatives.

Respectfully submitted,

PARKHURST & WENDEL, L.L.P.

March 7, 2005
Date


Roger W. Parkhurst
Registration No. 25,177
Robert N. Wieland
Registration No. 40,225

RWP:RNW/jmz

Attorney Docket No.: YMOR:294

PARKHURST & WENDEL, L.L.P.
1421 Prince Street, Suite 210
Alexandria, Virginia 22314-2805
Telephone: (703) 739-0220